

### ABSTRACT

An alternator includes an inner housing and an outer housing. A pair of o-rings positioned therebetween create a sealed flow chamber having a first flow channel, a second flow channel and an axial passageway. The first flow channel is a disk shaped cavity extending diametrically across the alternator. The second flow channel forms an annular jacket extending entirely around the alternator. The axial passageway directs coolant axially from the first flow channel into the second flow channel. An inlet positioned diametrically across from the axial passageway allows coolant to enter the first flow channel, such that coolant entering the inlet must flow diametrically across the alternator to reach the axial passageway. An outlet positioned diametrically across from the axial passageway allows coolant to exit the flow chamber, such that coolant entering the second flow channel must travel annularly around the alternator to reach the outlet.